DIGITRON™ Semiconductors

High-reliability discrete products and engineering services since 1977

MBR170-MBR1100

1 AMP SCHOTTKY RECTIFIERS

FEATURES

- Available as "HR" (high reliability) screened per MIL-PRF-19500, JANTX level. Add "HR" suffix to base part number.
- Available as non-RoHS (Sn/Pb plating), standard, and as RoHS by adding "-PBF" suffix.

MAXIMUM RATINGS

Rating	Symbol	MBR170	MBR180	MBR190	MBR1100	Unit
Peak repetitive reverse voltage **Working peak reverse voltage** **DC blocking voltage**	V_{RRM} V_{RWM} V_R	70	80	90	100	V
Average rectified forward current ($V_{R(equiv)} \leq 0.2\ V_{R(dc)}$, $R_{\Theta JA}$ = 50°C/W, PC board mounting with 1 ½" x 1 ½" copper surface)	I_O	1 @ T_A = 120°C				A
Non-repetitive peak surge current (surge applied at rated load conditions, halfwave, single phase, 60Hz)	I_{FSM}	50				A
Operating and storage junction temperature range	T_J, T_{stg}	-65 to +150				°C
Voltage rate of change (Rated V_R)	dv/dt	10				V/ns
Maximum thermal resistance Junction to ambient (lead length = ½")	$R_{\Theta JA}$	72				°C/W

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise specified)

Parameter	Symbol	MBR170	MBR180	MBR190	MBR1100	Unit
Maximum instantaneous forward voltage (1) (I_F = 1A, T_L = 25°C) (I_F = 1A, T_L = 100°C)	V_F	0.79 0.69				V
Maximum instantaneous reverse current (1) (Rated dc voltage, T_L = 25°C) (Rated dc voltage, T_L = 100°C)	I_R	0.5 5				mA

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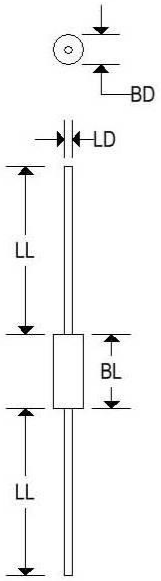
MECHANICAL CHARACTERISTICS

Case	DO-41
Marking	Alpha-numeric
Pin out	Cathode band



	DO-41			
	Inches		Millimeters	
	Min	Max	Min	Max
BD	-	0.107	-	2.720
BL	-	0.205	-	5.207
LD	0.028	0.034	0.711	0.864
LL	1.000	-	25.400	-

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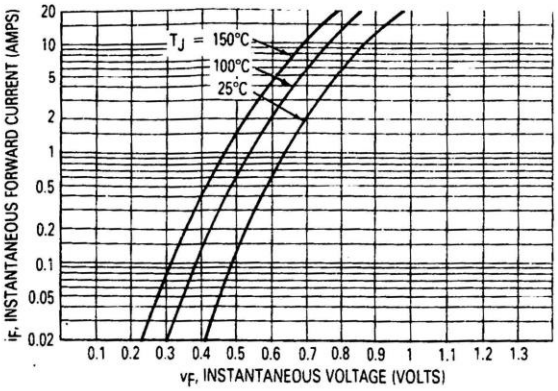

Figure 1. Typical Forward Voltage

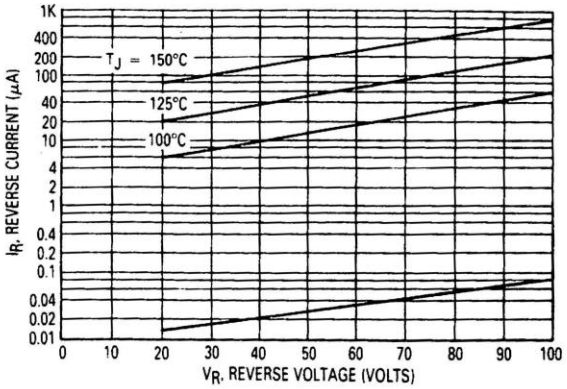

Figure 2. Typical Reverse Current*

*The curves shown are typical for the highest voltage device in the voltage grouping. Typical reverse current for lower voltage selections can be estimated from these same curves if V_R is sufficiently below rated V_R.

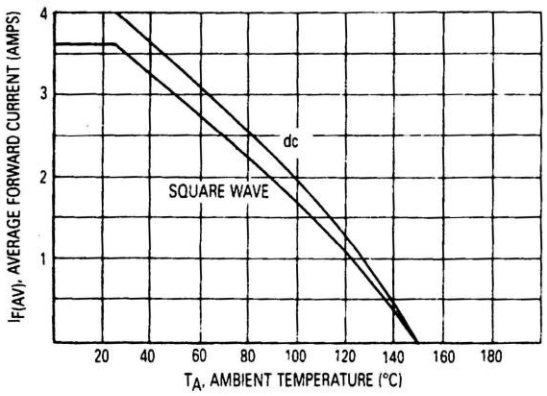

Figure 3. Current Derating (Mounting method 3 per note 1.)

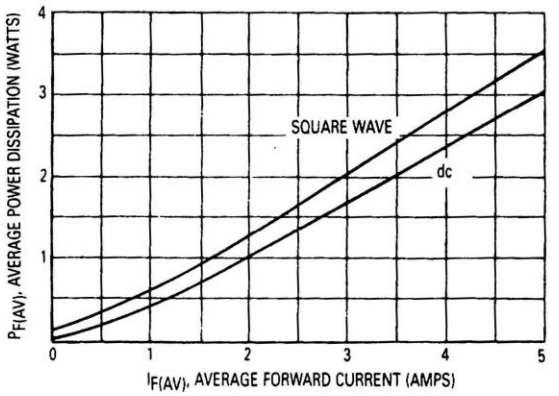

Figure 4. Power Dissipation